

AMENDMENTS TO THE CLAIMS

1. *(cancelled)*

2. *(currently amended)* A composition as claimed in claim [1] 5, wherein the inhibiting agent has no ozone depletion potential.

3. *(currently amended)* A composition as claimed in claim [1] 5, wherein the carrier gas is selected from the group consisting of air, carbon dioxide, argon, nitrogen and mixtures thereof.

4. *(currently amended)* A composition as claimed in claim [1] 5, wherein each component of the composition has GWP of less than 3000.

5. *(currently amended)* A [~~non-trifluoromethane-containing~~] cover gas composition adapted for the protection of molten magnesium/magnesium alloy, the composition including up to less than 1% by volume of a fluorine containing inhibiting agent selected from the group consisting of

5 [hydrofluorocarbons] difluoromethane, pentafluoroethane,

1,1,1,2-tetrafluoroethane, difluoroethane, heptafluoropropane,

dihydrodecafluoropentane, hydrofluoroethers and mixtures thereof, and a

carrier gas, wherein each component of the composition has a Global Warming Potential (GWP) (referenced to the absolute GWP for carbon dioxide at a time

10 horizon of 100 years) of less than 5000.

6. (*currently amended*) A composition as claimed in claim [1] 5 wherein the inhibiting agent has a boiling point of less than 100°C.

7. (*currently amended*) A composition as claimed in claim [1] 5, wherein the [~~inhibiting agent is~~] hydrofluoroethers are selected from the group consisting of [~~difluoromethane, pentafluoroethane, 1, 1, 1, 2-tetrafluoroethane, difluoroethane, heptafluoropropane,~~] methoxy-nonafluorobutane, ethoxy-
5 nonafluorobutane, [~~dihydrodecafluoropentane~~] and mixtures thereof.

8. (*previously presented*) A composition as claimed in claim 4 wherein each component of the composition has a GWP of less than 1500.

9. (*previously presented*) A composition as claimed in claim 7 wherein the inhibiting agent is 1, 1, 1, 2-tetrafluoroethane and the carrier gas is dry air.

10. (*previously presented*) A cover gas composition adapted for the protection of molten magnesium/magnesium alloy, the composition including a fluorine containing inhibiting agent selected from the group consisting of difluoromethane, pentafluoroethane, 1, 1, 1, 2-tetrafluoroethane,
5 difluoroethane, heptafluoropropane, methoxy-nonafluorobutane, ethoxy-nonafluorobutane, dihydrodecafluoropentane and mixtures thereof, wherein said inhibiting agent is up to less than 1% by volume of the composition, and a

carrier gas, wherein each component of the composition has a Global Warming Potential (GWP) (referenced to the absolute GWP for carbon dioxide at a time horizon of 100 years) of less than 5000.

11. *(previously presented)* A composition as claimed in claim 10 containing up to less than 0.5% by volume inhibiting agent.

12. *(previously presented)* A composition as claimed in claim 11 containing up to less than 0.1% by volume inhibiting agent.

13. – 32. *(cancelled)*

33. *(previously presented)* A composition as claimed in claim 7, wherein the inhibiting agent is 1, 1, 1, 2-tetrafluoroethane and the carrier gas is selected from the group consisting of nitrogen, carbon dioxide and mixtures thereof.

34. *(currently amended)* A method of protecting molten magnesium/magnesium alloy, comprising blanketing the magnesium/magnesium alloy with a ~~[non-trifluoromethane-containing]~~ cover gas composition containing up to less than 1% by volume of a fluorine containing inhibiting agent selected from the group consisting of difluoromethane, pentafluoroethane, 1, 1, 1, 2-tetrafluoroethane, difluoroethane, heptafluoropropane, dihydrodecafluoropentane, hydrofluoroethers, and

mixtures thereof, and a carrier gas, wherein each component of the composition has a Global Warming Potential (GWP) (referenced to the absolute GWP for carbon dioxide at a time horizon of 100 years) of less than 5000.

35.-38. *(cancelled)*

39. *(currently amended)* A method as claimed in claim 37, wherein [said hydrofluorocarbon] the inhibiting agent is 1, 1, 1, 2-tetrafluoroethane.

40. *(currently amended)* A method as claimed in claim [36] 34, wherein said fluorine containing inhibiting agent is a hydrofluoroether.

41. *(previously presented)* A method as claimed in claim 40, wherein said hydrofluoroether is selected from the group consisting of methoxynonafluorobutane, ethoxynonafluorobutane, and mixtures thereof.

42. *(cancelled)*

43. *(currently amended)* A method as claimed in claim [42] 34, wherein said carrier gas is selected from the group consisting of air, CO₂, argon, nitrogen, and mixtures thereof.

44. *(currently amended)* A method for protecting an exposed surface of molten magnesium/magnesium alloy from reacting with oxygen in air, comprising:

(a) providing molten magnesium/magnesium alloy;

(b) contacting said molten magnesium/magnesium alloy with a ~~[non-trifluoromethane-containing]~~ gaseous mixture ~~[comprising]~~ **including** up to less than 1% by volume of a fluorine containing inhibiting agent selected from the group consisting of **difluoromethane, pentafluoroethane, 1, 1, 1, 2-tetrafluoroethane, difluoroethane, heptafluoropropane, dihydrodecafluoropentane,** ~~[hydrofluorocarbons,]~~ hydrofluoroethers, and mixtures thereof; and

(c) forming a protective film/layer on the surface of said molten magnesium/magnesium alloy.

45. *(previously presented)* A method as claimed in claim 44, wherein the gaseous mixture further comprises a carrier gas.

46. *(previously presented)* A method as claimed in claim 45, wherein said carrier gas is selected from the group consisting of air, CO₂, argon, nitrogen, and mixtures thereof.

47-48. *(cancelled)*

49. (*currently amended*) A method as claimed in claim [47] 44, wherein [~~said hydrofluorocarbon~~] the inhibiting agent is 1, 1, 1, 2-tetrafluoroethane.

50. (*currently amended*) A method as claimed in claim [47] 44, wherein said fluorine containing inhibiting agent is a hydrofluoroether.

51. (*currently amended*) A method as claimed in claim [44] 50, wherein said hydrofluoroether is selected from the group consisting of methoxynonafluorobutane, ethoxynonafluorobutane, and mixtures thereof.